REMARKS

Rejection of the claims under 35 USC §112:

Claims 1-10, 12-14, 16-19, 21, 23, 25-26, and 29-30 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The action correctly states that the claims are drawn to a process for delivering a molecule–for example a molecule, protein or peptide–to an extravascular cell in a mammalian target tissue. The action further states that there is not ample written description for the compounds since the claims do not describe a single structural feature and that the specification does not clearly define or provide examples of what qualify as compounds of the claims invention. It is the Applicants opinion that the claims are directed to a method for *delivery* of molecules and are therefore not dependent on the structure of the molecules delivered. It is the method of delivery, and not the delivered agents, for which the Applicants seek a patent. In a similar manner, a patent for a type of syringe or catheter would not require a description of the contents to be injected.

Applicants have shown that their method can be used to delivery molecules with widely different molecular weights, charge, and function. The table below provides a partial listing of the molecules which Applicants have shown effective delivery in the specification as originally filed.

Molecule	Description	Size	Support
BOBO-3	positively charged DNA dye	1255 MW	Example 17 FIG. 6J
SV40-NLS	positively charged nuclear localizing peptide (39-mer)	4346 MW	Example 17-18 FIG. 6K
dextran	neutral polysaccharide	2000 MW 11,000 MW 70,000 MW	Example 17 FIG. 6A-6B Example 18 FIG. 7
Steptavidin-NLS	biotin binding protein	53,000+NLS MW	Example 17-18 FIG. 6F
IgG	immunoglobulin	150,000 MW	Example 17-18 FIG. 6L
β-galactosidase	tetrameric enzyme	464,000 MW	Example 17-18 FIG. 6G

Pentameric IgM	Immunoglobulin protein	900,000 MW	Example 17 FIG. 6D
Polystyrene microspheres	Plastic beads	20 nm 500 nm	Example 17 FIG. 6H-6I
T7	Bacteriophage	55 nm capsid + tail	Example 17 FIG. 6M
Adenovirus	virus	90-100 nm	Example 14
pMIR48	plasmid	4678 base pairs >3,000,000 MW	Examples 1-3
nucleic acid / polymer complex	DNA + polycation (positive and negative charge)	~100 nm	Examples 1-3

Delivery to numerous tissues (skeletal muscle, heart, liver, lung, kidney, diaphragm, prostate) in numerous mammals (mouse, rat, dog, pig, primate) has been shown.

Applicants request reconsideration of the §112 rejection.

Rejection of the claims under 35 USC §102:

Claims 1-10, 12-27, and 29 have been rejected under 35 U.S.C. 102(b) as being anticipated by Twist et al. (U.S. Patent 5,633,230). The Action states that Twist et al. teach intravenous injection of peptide in 10 ml (example 4). Applicants respectfully disagree. While Twist et al. teach that their peptide was dissolved in 10 ml PBS, they specifically teach that the injection volume was 0.25 ml (see first paragraph, example 4). Twist et al. do not teach increasing vascular permeability, increasing extravascular fluid volume, swelling of the target tissue, or extravasation of the molecule via the increased vascular permeability. Applicants have provided guidance and examples for injection volumes and rate for injection into the tail vein of a mouse liver (1.0 ml per 10 g body weight, see examples). Applicants provide, with this letter, a declaration under 37 C.F.R. 1.132 showing that injection of 0.25 ml volume into a mouse tail vein as taught by Twist et al. does not provide a sufficient volume to cause a transient increase in vascular permeability or increased extravascular fluid volume within a target tissue. Applicants request reconsideration of this §102 rejection.

Claims 1-10, 12-27, 29, and 30 have been rejected under 35 U.S.C. 102(b) as being anticipated by Goddard (U.S. Patent 5,602,094). Applicants respectfully disagree. The Action notes that Goddard teaches the total volume was increased to 10 ml prior to injection. However, in his examples, Goddard teaches only direct tumor injection of this volume (column 4 lines 38-42, column 5 lines 21-22, 29-34. Goddard does not teach "the volume of the injection solution and the rate of injection solution insertion cause transient increased vascular permeability in the target tissue, increased extravascular fluid volume within the target tissue, swelling of the target tissue, and extravasation of the molecule via the increased vascular permeability". Further, Goddard provides no guidance on the volume or rate for intravascular injection. Applicants request reconsideration of this §102 rejection.

Claims 1-2, 4-8, 12-27, 29, and 30 have been rejected under 35 U.S.C. 102(e) as being anticipated by Wolff et al. (US-2002-0001574). Applicants have amended the claims to obviate the rejection. Specifically, Applicants have incorporated the limitations of claims 9 and 10 into claims 1 and 30. In light of the amendments, Applicants request reconsideration of the 102(e) rejection.

Double Patenting:

Claims 1-2, 4-8, 12-14, 16-17, 23, 29, and 30 have been rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 and 14 of U.S. Patent 7,144,869. Applicants have amended the claims to obviate the rejection. Specifically, Applicants have incorporated the limitations of claims 9 and 10 into claims 1 and 30. In light of the amendments, Applicants request reconsideration of the double patenting rejection.

The Examiner's rejections are now believed to be overcome by this response to the Office Action. In view of Applicants' amendment and arguments, it is submitted that claims 1-2 and 4, 7-8, and 12-30 should be allowable.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the USPTO on this date: 04/21/2008 .

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